**Amendments to the Specification**

In the Title, please change as follows:

Anisotropic Magneto-Resistive (AMR) ~~AMR~~ Sensor Element for Angle Measurement

*In the Specification, on page 1, please change lines 1-3, as shown.*

The invention relates to a ~~magnetoresistive~~ magneto-resistive angle sensor ~~comprising a sensor~~ having a sensor device for detecting an angle a of an external magnetic field relative to a reference axis of the sensor device

*In the Specification, on page 2, please change lines 14-17, as shown.*

~~It is an object of the invention to specify~~ In an example embodiment, a ~~magnetoresistive~~ magneto-resistive angle sensor which on account of its design has a considerably smaller offset signal and thus allows more accurate measurements, wherein the output signal can be fed directly for evaluation. ~~This object is achieved by the features specified in claim 1.~~ The magneto-resistive angle sensor includes a sensor device for detecting and angle ($\alpha$) of an external magnetic field relative to a reference axis of the sensor device. Included in the sensor device is a flat anistropic magneto-resistive (AMR) layer with one electrical contact ($K_0$) for applying a current. A plurality of electrical contacts ($K_i$) measure a flow of current through the AMR layer.

*In the Specification, on page 3, please change lines 11-34, as shown.*

~~The development of the AMR layer as specified in claim 2~~ Having a magneto-resistove angle sensor with the sensor device a circular AMR layer means that the sensor device is designed to be symmetrical in relation to all possible orientations of the external magnetic field. The sensor device or the magnetoresistive angle sensor equipped

therewith can thus detect any angle between the external magnetic field and the circular AMR layer.

~~Advantageously, in a circular AMR layer, the electrical contact for applying a current is arranged in the center of the circular AMR layer, as specified in claim 3.~~ In a circular AMR layer, the electrical contact for applying a current is arranged in the center. A symmetrical design of the sensor device formed in this way is thereby achieved, wherein the magnetic flux flowing through the AMR layer, particularly when there are further electrical contacts arranged at the edge of the circular AMR layer ~~as claimed in claim 4,~~ respectively passes through an equal-length path of the AMR layer from the central contact to the edge contacts, regardless of the orientation of the external magnetic field. ~~In this case,~~ In this example embodiment, the plurality of electrical contacts at the edge are preferably arranged so that they are distributed equidistantly around the edge. ~~In one advantageous development,~~ In one example embodiment, eight electrical contacts are provided at the edge. This allows a sufficiently precise resolution of the angle between the external magnetic field and an imaginary reference axis of the sensor device by extrapolating the measurement results. On account of the 180° periodicity of the AMR layer over the angle of the external magnetic field, it is particularly advantageous to add the current flowing through in each case two opposite edge contacts in order in this way to obtain four difference current signals. A first current signal is obtained by the currents flowing through the edge contacts 1 and 5, a second current signal is obtained by the currents flowing through the contacts 2 and 6, a third current signal is obtained by the currents flowing through the contacts 3 and 7 and a fourth current signal is obtained by the currents flowing through the contacts 4 and 8. If the third difference current signal is subtracted from the first difference.

*In the Specification, on page 4, please change lines 6-34, as shown.*

~~In one alternative development, which is specified in claim 5,~~ In another example embodiment, the AMR layer is designed to be essentially semicircular. As a result it is possible in particular to reduce the size of the sensor device, since only half the surface area of a full circle as described above is required. A semicircular

design of the AMR layer is sufficient since, as mentioned above, the AMR layer has 180° periodicity in relation to the external magnetic field.

~~According to the development of~~ According to another example embodiment, the AMR layer ~~as specified in claim 6,~~ when it is designed in a semicircular manner the electrical contact for applying a current is once again arranged in the center of the associated full circle or in the center of the straight side of the semicircle of the semicircular AMR layer.

~~Furthermore, as specified in claim 7,~~ Furthermore, in another example embodiment, ~~it is proposed that~~ a plurality of electrical contacts may be arranged at the edge of the semicircular AMR layer, in particular five electrical contacts, which are arranged at the semicircular edge of the layer and are distributed equidistantly with respect to one another. A sufficient resolution of the angle between the external magnetic field and the sensor device is thus possible. The above-described sine and cosine signals are in this case obtained by adding the current present across the first and fifth contacts minus the current present across the third contact or by subtracting the current present across the fourth contact from the current present across the second contact,

In order to improve the measurement accuracy of the magnetoresistive angle sensor, ~~it is proposed in claim 8 that~~ the plurality of electrical contacts may be placed at the same potential ~~in order~~ to avoid affecting the current intensities measured at the contacts. In particular, all the electrical contacts are placed at ground potential so that no fault currents flow and no error voltages are present.

~~Simple manufacture of the AMR layer by the person skilled in the art is made possible by virtue of a development specified in claim 9.~~ In example embodiment, manufacture of the AMR layer by a person skilled in the art may be accomplished by applying a Permalloy layer to a silicon support substrate and providing the Permalloy layer with electrical contacts. ~~Applying a Permalloy layer to a silicon support substrate and providing said Permalloy layer with electrical contacts can be carried out by the person skilled in the art, wherein, by virtue~~ By virtue of the above-described developments of the AMR layer, any undercuts of the Permalloy layer which occur

at the edge of the AMR layer during manufacture are of virtually ~~no consequence~~ no consequence. ~~and thus the~~ Thus, the measurement results of the sensor are not falsified.

*In the Specification, on page 5, please change lines 1-7, as shown.*

It will be understood that such sensors can be used in all fields of technology in which it is desired to measure an angle of a rotating object. ~~Advantageously, however,~~ In an example embodiment, such sensors are used in motor vehicle technology~~, as specified in claim 10, in order in particular~~ to monitor and control the position of a pedal ~~and/or~~ or the position of a throttle so as to regulate the power of an engine. The angular resolution of the angle between the external magnetic field and the sensor that can be achieved with such sensors is sufficient for applications in motor vehicle technology.

*In the Specification, on page 6, please change lines 12-18, as shown.*

The alternative embodiment shown in Fig. 5 allows the ~~magnetoresistive~~ magneto-resistive angle sensor 100 to be miniaturized since the semicircular AMR layer 15 takes up less space than a full-circle AMR layer 14. In this case, five contacts K1 to K5 are arranged in an equidistantly distributed manner around the semicircular edge of the AMR layer 15, in order in each case to obtain a flow of current between these contacts K, and the contact $K_0$ arranged in the center of the straight edge of the AMR layer 15. The above-described sine or cosine signals are then obtained by adding or subtracting the various signals as follows:

*In the Specification, on page 7, please change lines 1-12, as shown.*

| | |
|---|---|
| 100 | ~~magnetoresistive~~ magneto-resistive angle sensor |
| 10 | AMR angle sensor (prior art) |
| 11 | Wheatstone bridge |
| 12 | Wheatstone bridge |
| 13 | meandering resistor |
| 14 | circular AMR layer |
| 15 | semicircular AMR layer |
| $K_0$ | central current contact |
| $K_i$ | edge current contact, I = 1 to 8 |
| $\alpha$ | angle between a magnetic field and a sensor device |
| I | current intensity |
| U | voltage |